



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, DC 20460

OFFICE OF CHEMICAL SAFETY  
AND POLLUTION PREVENTION

April 15, 2016

Lauren Seabrook  
Federal Regulatory Manager  
Makhteshim Agan of North America (d/b/a ADAMA)  
3120 Highwoods Blvd., Suite 100  
Raleigh, NC 27604

Subject: Notification per PRN 98-10 – Minor label updates  
Product Name: Cotoran 4L  
EPA Registration Number: 66222-181  
Application Date: April 7, 2016  
Decision Number: 516098

Dear Ms. Seabrook:

The Agency is in receipt of your Application for Pesticide Notification under Pesticide Registration Notice (PRN) 98-10 for the above referenced product. The Registration Division (RD) has conducted a review of this request for its applicability under PRN 98-10 and finds that the action requested falls within the scope of PRN 98-10.

The label submitted with the application has been stamped “Notification” and will be placed in our records.

Should you wish to add/retain a reference to the company’s website on your label, then please be aware that the website becomes labeling under the Federal Insecticide Fungicide and Rodenticide Act and is subject to review by the Agency. If the website is false or misleading, the product would be misbranded and unlawful to sell or distribute under FIFRA section 12(a)(1)(E). 40 CFR 156.10(a)(5) list examples of statements EPA may consider false or misleading. In addition, regardless of whether a website is referenced on your product’s label, claims made on the website may not substantially differ from those claims approved through the registration process. Therefore, should the Agency find or if it is brought to our attention that a website contains false or misleading statements or claims substantially differing from the EPA approved registration, the website will be referred to the EPA’s Office of Enforcement and Compliance.

If you have any questions, please contact Emily Schmid by phone at 703-347-0189, or via email at [schmid.emily@epa.gov](mailto:schmid.emily@epa.gov).

Sincerely,

A handwritten signature in blue ink that reads "Emily Schmid for".

Reuben Baris, Product Manager 25  
Herbicide Branch  
Registration Division (7505P)  
Office of Pesticide Programs

<u>GROUP</u>	<u>Z</u>	<u>HERBICIDE</u>
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**COTORAN® 4L  
HERBICIDE**

For Weed Control in Cotton

**ACTIVE INGREDIENTS\***

Fluometuron: 1,1-dimethyl-3-(a,a,a-trifluoro-m-tolyl) urea .....41.7%

**OTHER INGREDIENTS** .....58.3%

**TOTAL**.....100.0%

\*Cotoran 4L Contains 4 Pounds Active Ingredient Per Gallon

**KEEP OUT OF REACH OF CHILDREN  
CAUTION / PRECAUCION**

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted in detalle.  
(If you do not understand the label, find someone to explain it to you in detail).

**Manufactured for:**

Makhteshim Agan of North America, Inc.(d/b/a ADAMA)  
3120 Highwoods Blvd., Suite 1004545 Falls of Neuse Rd., Suite 300  
Raleigh, NC 276049

EPA Reg. No. 66222-181

EPA Est. No: [REDACTED]

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**NET CONTENTS: \_\_\_\_\_ GALLON(S)**

**FIRST AID**

<b>IF IN EYES</b>	<ul style="list-style-type: none"> <li>Hold eye open and rinse slowly and gently with water for 15 to 20 minutes</li> <li>Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.</li> <li>Call a poison control center or doctor for treatment advice.</li> </ul>
<b>IF ON SKIN OR CLOTHING</b>	<ul style="list-style-type: none"> <li>Take off contaminated clothing.</li> <li>Rinse skin immediately with plenty of water for 15 to 20 minutes.</li> <li>Call a poison control center or doctor for treatment advice.</li> </ul>
<b>IF SWALLOWED</b>	<ul style="list-style-type: none"> <li>Call a poison control center or doctor immediately for treatment advice</li> <li>Have person sip a glass of water if able to swallow</li> <li>Do not induce vomiting unless told to do so by a poison control center or doctor.</li> <li>Do not give anything by mouth to an unconscious person.</li> </ul>
<b>IF INHALED</b>	<ul style="list-style-type: none"> <li>Move person to fresh air</li> <li>If person is not breathing, call 911 or ambulance, then give artificial respiration, preferably mouth-to-mouth, if possible.</li> <li>Call a poison control center or doctor for further treatment advice.</li> </ul>

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact PROSAR at 1-877-250-9291 for emergency medical treatment information.

**NOTE TO PHYSICIAN:** If Cotoran 4L is ingested, lavage stomach or induce vomiting. A slurry of activated charcoal in water can be left in the stomach. Give a saline laxative and supportive therapy.

Cotoran 4L, EPA #66222-181  
Amendment to add Groundwater Advisory Statements  
02-08-12 version 2 (w/EPA changes)  
Page 1 of 10

**NOTIFICATION**

66222-181

The applicant has certified that no changes, other than those reported to the Agency have been made to the labeling. The Agency acknowledges this notification by letter dated:

4/15/2016

**PRECAUTIONARY STATEMENTS  
HAZARDS TO HUMANS AND DOMESTIC ANIMALS**

**CAUTION:** Avoid contact with eyes, skin or clothing. Causes moderate eye irritation. Harmful if absorbed through skin, swallowed or inhaled. Avoid breathing spray mist.

**PERSONAL PROTECTIVE EQUIPMENT (PPE)**

Some materials that are chemical-resistant to this product are polyethylene or polyvinyl chloride. If you want more options, follow the instructions for Category A on an EPA chemical-resistance category selection chart.

**Mixers and loaders supporting aerial application must wear:**

- coveralls over long-sleeved shirt and long pants,
- chemical-resistant gloves,
- chemical-resistant footwear and socks, and
- a chemical-resistant apron

**All other mixers, loaders, applicators, flaggers and other handlers must wear:**

- long-sleeved shirt,
- long pants
- shoes and socks, and
- chemical-resistant gloves (except applicators and flaggers)

See engineering controls for additional requirements and options.

Follow manufacturer's instructions for cleaning / maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry.

Discard clothing or other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them.

**Engineering Controls Statements:**

When handlers use closed systems or enclosed cabs in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240 (d)(4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS.

Enclosed cockpits for Aerial Applicators Engineering Controls: Pilots must use an enclosed cockpit that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240(d)(6)].

Important: When reduced PPE is worn because a closed system is being used, handlers must be provided all PPE specified above for "Applicators and other handlers" and have such PPE immediately available for use in an emergency, such as spill or equipment breakdown.

**USER SAFETY RECOMMENDATIONS**

Users should wash hands before eating, drinking, chewing gum, using tobacco or using the toilet. Users should remove clothing / PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.

Users should remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash- thoroughly and change into clean clothing.

**ENVIRONMENTAL HAZARDS**

This chemical, fluometuron is known to leach through soil into ground water under certain conditions, including karst geology areas, as a result of registered uses. Use of this chemical in areas where soils are permeable, particularly where the water table is shallow, may result in ground water contamination.

Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when cleaning equipment or disposing of equipment washwaters or rinsate.

**Groundwater advisory:** Do not apply within 100 feet of any well used for potable water. Do not apply to fields with dewatering or agricultural drainage wells. Do not apply this product within 100 feet from the edge of areas containing karst topographical features containing sinkholes, caverns, springs, and sinking or disappearing streams. Where groundwater aquifers exist at a depth of 30 feet or less from the surface, do not apply this product where soils are Hydrologic Group A.

## INTEGRATED PEST MANAGEMENT

This product may be used as part of an Integrated Pest Management (IPM) program that can include biological, cultural, and genetic practices aimed at preventing economic pest damage. IPM principles and practices include field scouting or other detection methods, correct target pest identification, population monitoring, and treating when target pest populations reach locally determined action thresholds. Consult your state cooperative extension service, professional consultants or other qualified authorities to determine appropriate action treatment threshold levels for treating specific pest/crop systems in your area.

## RESISTANCE

When herbicides that affect the same biological site of action are used repeatedly over several years to control the same weed species in the same field, naturally-occurring resistant biotypes may survive a correctly applied herbicide treatment, propagate, and become dominant in that field. Adequate control of these resistant weed biotypes cannot be expected. If weed control is unsatisfactory, it may be necessary to retreat the problem area using a product affecting a different site of action. To better manage herbicide resistance through delaying the proliferation and possible dominance of herbicide resistant weed biotypes, it may be necessary to change cultural practices within and between crop seasons such as using a combination of tillage, retreatment, tank-mix partners and/or sequential herbicide applications that have a different site of action. Weed escapes that are allowed to go to seed will promote the spread of resistant biotypes. It is advisable to keep accurate records of pesticides applied to individual fields to help obtain information on the spread and dispersal of resistant biotypes. Consult your agricultural dealer, consultant, applicator, and/or appropriate state agricultural extension service representative for specific alternative cultural practices or herbicide recommendations available in your area.

## DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its label.

Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation. Do not apply this product through any type of irrigation system.

## AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR Part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE), and restricted-entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

Do not enter or allow worker entry into treated areas during the restricted-entry interval (REI) of 24 hours.

Exception: If product is soil-injected or soil-incorporated, the Worker Protection Standard, under certain circumstances, allows workers to enter the treated area if there will be no contact with anything that has been treated.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water, is:

- Coveralls worn over short-sleeved shirt and short pants,
- Chemical-resistant gloves made of any waterproof material,
- Chemical-resistant footwear plus socks, and
- Protective eyewear

### PRODUCT INFORMATION

Cotoran 4L is effective for both annual grass and annual broadleaf weed control in cotton.

#### Weed Control

Cotoran 4L applied according to directions will selectively control annual weeds in cotton, such as:

<b>Annual Grass Weeds</b>		
Barnyardgrass	Goosegrass	Fall panicum
Foxtail	Crowfootgrass	Signalgrass (Brachiaria)
Crabgrass	Ryegrass	
<b>Annual Broadleaf Weeds</b>		
Buttonweed	Lambsquarters	Ragweed
Cocklebur	Marestail (Horseweed)	Sesbania
Florida Pusley	Morningglory	Sicklepod
Groundcherry (Wright)	Pigweed	Smartweed
Jimsonweed	Prickly Sida (teaweed)	Tumbleweed
	Purslane	

Cotoran 4L at rates up to 4 pints per acre in cotton is not effective for the control of established perennial weeds, such as johnsongrass, from rhizomes.

### COTTON

Cotoran 4L may be applied preplant, preemergence or postemergence. For preplant and preemergence treatment only, Cotoran 4L may be tank-mixed with most liquid nitrogen fertilizers. Cotoran 4L may be combined with other herbicides in cotton as directed in the Combinations section.

#### PRECAUTIONS

The use of Cotoran 4L preplant or preemergence in conjunction with a soil applied organophosphate insecticide at planting may result in injury to cotton. In addition, Cotoran 4L applied to cotton with any application of Command® (clomazone) herbicide may result in crop injury. To the extent consistent with applicable law, MANA will not be held responsible for losses or damage resulting from such uses.

**The second application of Cotoran 4L cannot be made earlier than 20 days following the initial application.**

Rainfall that is sufficient to germinate seeds or for growing crops is adequate to activate the herbicidal activity of COTORAN4L; where dry weather conditions prevail, the herbicidal activity of Cotoran 4L may be delayed or reduced. Cultivate if weeds develop.

Do not make more than two applications of Cotoran 4L to the same crops or field in any 1 year. Do not plant crops other than cotton after the last application of Cotoran 4L, without following the plantback intervals, or injury may result.

**Plantback intervals for the following crops in areas other than AZ and NM\* are as follows:**

- 3 months for wheat
- 8 months for field corn, sweet corn, and peanuts
- 9 months for rice, grain, sorghum and soybeans
- 12 months for all other crops not listed above

**\*See statement below for AZ and NM plantback restrictions.**

Do not apply within 60 days of harvest. Do not feed foliage from treated cotton plants to livestock.

**TABLE #1: APPLICATION SOIL RESTRICTIONS**

Broadcast Rates per Pints Per Acre of Cotoran 4L and Active Ingredient Equivalent

Soil Texture	Maximum One-time Application Rate	Annual Maximum Number of Applications Per Year	Annual Maximum Application Rate
Sand, loamy sand, and sandy loam soils	2 pts (1 lb ai/A)	2	4 pts (2 lb ai/A)
Loam, silt loam, silt, sandy clay loam, silty clay loam, and clay loam soils	3.2 pts. (1.6 lb ai/A)	2	6 pts (3 lb ai/A)
Sandy clay, silty clay, and clay soils	4 pts (2 lb ai/A)	2	6 pts (3 lb ai/A)

Mandatory Interval between Applications: There must be a minimum of 20 days between the first and second application of Cotoran 4L.

Other State and Local Requirements:

Applicators must follow all state and local pesticide drift requirements regarding application of products containing the active ingredient fluometuron. Where states have more stringent regulations, they must be observed. Before applying Cotoran 4L, refer to Table #1 in the PRECAUTIONS section for specific application rate soil restrictions.

**AR, LA and MS only:** Use 1.6 pints of Cotoran 4L per acre on sandy loam soils low in organic matter.

**AZ and NM only:** Cotton, corn and grain sorghum can be planted the next spring. Do not plant treated areas to other crops until 1 year after last application. Do not use on sandy or coarse-textured soil of less than 1% organic matter.

**West TX only:** Do not use Cotoran 4L on sandy, loamy sand, or fine sandy loam soils. Do not use Cotoran 4L on cotton planted in furrows.

#### Preplant Treatment (except AZ and NM)

Cotoran 4L may be applied for burndown of existing annual weeds and residual control of weeds prior to planting cotton. Apply Cotoran 4L at a rate of 2 to 4 pints per acre from 15 to 75 days prior to anticipated planting. On light silt and sandy soils, low in organic matter, use the lower rate. Apply before weeds germinate or before weed seedlings are more than 2 inches tall. If weeds are emerged prior to application, the addition of a surfactant is recommended. When emerged weeds are taller than 2 inches or weeds not listed on the Cotoran 4L label are present, Cotoran 4L may be tank mixed with other products registered for preplant applications in cotton. Consult tank mix product labels for specific rate instructions and precautions. Early preplant applications may require additional weed control before planting. Before applying Cotoran 4L refer to Table #1 in the PRECAUTIONS section for specific application rate soil restrictions.

Preemergence applications of herbicides with a similar mode of action (such as diuron) following a preplant application of Cotoran 4L may result in cotton injury. This is most critical where applications of Cotoran 4L are made less than 30 days preplant, on coarse textured soils, and on soils low in organic matter.

Marestail (Horseweed): For improved residual control of marestail, apply a preplant burndown tank mix of glyphosate plus Clarity® plus Cotoran 4L or Ignite® plus Cotoran 4L.

#### Preplant Incorporated Use (AZ and NM)

Cotoran 4L may be applied preplant as a broadcast spray at 3.2 pints per acre after the beds for preplant irrigation have been formed. Apply before the beds are dragged off (using a bed shaper set to remove 1 to 2 inches from beds) in preparation for planting. Furrow irrigation should precede the application and planting should follow as soon as possible. Plant into untreated soil after drag-off and return treated soil to the beds when furrows are reformed. Do not allow furrow irrigation water to pond over the beds. Before applying Cotoran 4L refer to Table #1 in the PRECAUTIONS section for specific application rate soil restrictions.

#### Preemergence Treatment

Apply Cotoran 4L at a rate of 2 to 4 pints per acre. On light silt and sandy soils, low in organic matter, use the lower rate. Before applying Cotoran 4L refer to Table #1 in the **PRECAUTIONS** section for specific application rate soil restrictions. Plantback intervals must be as follows:

- 3 months for wheat
- 8 months for field corn, sweet corn, and peanuts
- 9 months for rice, grain, sorghum and soybeans
- 12 months for all other crops not listed above

**Postemergence Treatments**

Cotoran 4L may be applied postemergence to cotton, but preemergence to weeds, or postemergence to both cotton and weeds. Cotoran 4L must be applied at rates of 2 to 4 pints per acre. Apply as a directed, semi-directed, or over-the-top spray. Cotoran 4L may be applied to cotton plants at any stage of growth from 3 inches high to lay-by. Use the higher rate when applying postemergence to weeds; weeds should be 2 inches high or less. Use of a surfactant that is approved by FDA for use on food and feed crops and is compatible with Cotoran 4L when applied to cotton, may enhance the postemergence herbicidal activity of Cotoran 4L. The surfactant rate should not exceed 0.5% of the carrier volume (1 pint per 25 gallons of water). Before applying Cotoran 4L refer to Table #1 in the **PRECAUTIONS** section for specific application rate soil restrictions.

**COMBINATIONS**

**Pyrimax™ 3.2 L:**

A program of Pyrimax 3.2 L at 1.3 – 2.1 fl. Oz / A plus Cotoran 4L at 2 to 4 pints per acre applied preemergence followed by Pyrimax 3.2L early postemergence can be used for improved control of bristly starbur, coffee senna, common ragweed, Florida beggarweed, hemp sesbania, jimsonweed, ladythumb, smartweed, lambsquarter, annual morningglory (cypressvine, entireleaf, ivyleaf, pitted, purple, red/scarlet, sharppod / cotton, smallflower) Pennsylvania smartweed, pigweed (redroot, smooth, spiny), prickly sida, spotted spurge, spurred anoda, velvetleaf and for suppression of palmer pigweed. On light silt and sandy soils, low in organic matter, use the lower rate. Before applying Cotoran 4L refer to Table #1 in the **PRECAUTIONS** section for specific application rate soil restrictions.

**Specific Weed Problems** (Sicklepod, Wild Poinsettia, Yellow Nutsedge): For improved control of the above weeds and other labeled weeds that often occur in high populations and/or have multiple seasonal flushes, a program of Pyrimax 3.2 L at 1.7-2.1 oz/A plus Cotoran 4L at 2-4 pints per acre applied preemergence followed by a postemergence application of Pyrimax 3.2 L alone or in combination with MSMA or DSMA is recommended. On light silt and sandy soils, low in organic matter, use the lower rate.

Before applying Cotoran 4L refer to Table #1 in the **PRECAUTIONS** section for specific application rate soil restrictions.

**MANA-Parallel® PCS:**

Use in a tank mixture with Cotoran 4L preemergence in cotton for control of all weeds as listed on both labels. This combination will also control spotted spurge, hyssop spurge, nodding spurge, and prostrate spurge. Apply to the soil surface at planting or after planting, but before weeds or crops emerge, using the appropriate rates from the following table.

**Cotoran 4L + Parallel PCS – Cotton**

Soil Texture	Cotoran 4L (pts.)	Broadcast Rates Per Acre	
		Parallel PCS (pts.)	
		Area 1**	Area 2***
Sand, Loamy sand		DO NOT USE	
Sandy loam*	2	.75 -1.0	.85 – 1.0
Loam, Silt loam, Silt	2 – 3.2	1.0 – 1.33	1.0 – 1.33
Fine Soil	3.2 – 4	1.0 – 1.33	1.33

\* Use on sandy loam soils only in eastern OK, Gulf Coast, Rio Grande Valley and eastern TX

\*\* Area 1 = AR, LA, MS, Bootheel of MO and TN

\*\*\* Area 2 = Eastern OK, Gulf Coast, Rio Grande Valley, and Eastern TX

**Precautions:**

(1) Do not apply Cotoran 4L + Parallel PCS on sand or loamy sand soils or in areas where water is likely to “pond” over the bed, or crop injury may occur.

(2) Do not apply broadcast to furrow-planted cotton.

(3) The use of Cotoran 4L preplant or preemergence in conjunction with a soil applied organophosphate insecticide at planting may result in injury to cotton. In addition, Cotoran 4L applied to cotton with any application of "Command" (clomazone) herbicide may result in crop injury. To the extent consistent with applicable law, MANA will not be held responsible for losses or damage resulting from such uses.

(4) Do not use on Taloka silt loam, or crop injury may occur.

Before applying Cotoran 4L refer to Table #1 in the PRECAUTIONS section for specific application rate soil restrictions.

Refer to the Parallel PCS label for further instructions, precautions, and limitations.

**Note:** Do not feed treated forage to livestock, or graze treated areas.

**Rotational Crops:** Refer to the crop rotation instructions for Cotoran 4L alone on this label and for Parallel PCS alone on the Parallel PCS label.

**Triflurex® HFP:**

Use in a tank mixture with Cotoran 4L (all areas except AZ) or before an overlay with Cotoran 4L in cotton for control of all weeds listed on both labels.

For the tank mixture, follow soil preparation and incorporation procedures for Triflurex HFP. Apply Cotoran 4L + Triflurex HFP tank mix at rates specified below in a minimum of 15 gallons of water per acre.

**Cotoran 4L + Triflurex Tank Mixture – Cotton (All areas except AZ)**

Soil Texture	Broadcast Rates Per Acre	
	Cotoran 4L	Triflurex HFP
Sand, Loamy sand, Sandy loam	2 pts	1 pt
Loam, Silty clay loam*, Silt loam, Silt, Sandy clay loam,* Clay loam	3.2 pts	1.5 pts
Clay, clay loam, Silty clay loam*, Silty clay, Sandy clay, Sandy clay loam*	4 pts	2 pts

\*Silty clay loam and sandy clay loam are transitional soils. If these soils are predominantly sand or silt, they are usually classified as medium-textured soils. If predominantly clay, they are classified as fine-textured soils.

For the overlay, apply Cotoran 4L as a preemergence soil surface treatment as specified on this label at 2 to 4 pints per acre after a preplant soil incorporated treatment of Triflurex HFP. Apply Triflurex HFP as specified on its label at 1 to 2.5 pints per acre.

**Precautions:** Do not use the tank mix in AZ. Do not apply the tank mix of Cotoran 4L + Triflurex HFP in liquid fertilizer. Refer to the Triflurex HFP label for direction, precautions, and limitations for use of that product, as well as the directions, precautions, and limitations on this Cotoran 4L label. Before applying Cotoran 4L refer to Table #1 in the PRECAUTIONS section for specific application rate soil restrictions.

**Prowl®:**

Apply Cotoran 4L as a preemergence surface treatment as specified on this label at 2 to 4 pints per acre after a preplant treatment of Prowl for control of all weeds listed on both labels. Refer to the Prowl label for directions, precautions, and limitations for use of that product. Before applying Cotoran 4L refer to Table #1 in the PRECAUTIONS section for specific application rate soil restrictions.

**DSMA or MSMA:**

Cotoran 4L may be tank-mixed with DSMA or MSMA and applied as a directed spray to cotton from 3 inches high to first bloom. Use the broadcast rate of 2 to 4 pints of Cotoran 4L per acre and the necessary amount of DSMA or MSMA plus 0.5% (1 pint / 25 gallons) of a surfactant that is approved by FDA for use on food and feed crops and is compatible with Cotoran 4L + DSMA or Cotoran 4L + MSMA when applied to cotton. When using this mixture, do not allow spray to contact cotton foliage. Do not graze treated areas or feed treated forage to livestock. Adhere strictly to the dosage, precautions, and limitations of the labels of the products. Before applying Cotoran 4L refer to Table #1 in the PRECAUTIONS section for specific application rate soil restrictions.

**APPLICATION PROCEDURES**  
**Mixing Instructions**

- (1) Fill spray tank 1/2 to 3/4 full with clean water or nitrogen solution.
- (2) Start agitation.
- (3) Pour Cotoran 4L directly from the container into the partially filled spray tank.
- (4) If Cotoran 4L is to be tank-mixed with another herbicide, add that product after the Cotoran 4L is thoroughly mixed in the partially filled spray tank.
- (5) Add the rest of the water or nitrogen solution.
- (6) Provide agitation during mixing and application to maintain a uniform suspension.

To determine compatibility, add 2 teaspoons of Cotoran 4L to 1 pint of nitrogen solution (equals 4 pints in 25 gallons; if using other application rates, adjust compatibility test amounts proportionally). Stir or shake thoroughly. Let stand 5 minutes. If it remains mixed or can be remixed readily, the mixture is compatible and can be used. If Cotoran 4L settles out when mixed with a nitrogen solution, a suspensibility agent, such as Compex<sup>®</sup>, Unite<sup>®</sup>, or equivalent at 1 to 3 pints per 100 gallons of fertilizer may improve compatibility. Add 1/8 to 3/8 teaspoon of Unite to the compatibility test to determine its effectiveness.

**Equipment**

Thoroughly clean sprayer prior to use. Do not use a sprayer contaminated with 2,4-D or other materials, as crop damage or sprayer clogging may result.

All application must be properly maintained and calibrated using appropriate carriers or surrogates. Use properly calibrated conventional spray equipment that will apply spray uniformly and has hydraulic or mechanical agitation, except in Arizona, where only mechanical agitators are recommended. Screens in nozzles, in suction, and in-line strainers should be no finer than 50-mesh. Use a pump with capacity to maintain 35-40 psi at the nozzles. If hydraulic agitation is used, the pump should also provide sufficient agitation in the tank to keep the mixture in suspension. Avoid leaving spray mixture in tank without constant agitation. If bypass agitation is used, it should terminate at the bottom of the tank to minimize foaming. Wash sprayer thoroughly with clean water immediately after use.

Apply in a minimum of 10 gallons per acre for preplant incorporated or preemergence applications, or apply in a minimum of 20 gallons per acre for postemergence application.

**Band Treatment**

For band treatment, calculate the amount of Cotoran 4L needed by the formula:

$$\frac{\text{Band width (in)}}{\text{Row width (in)}} \times \frac{\text{broadcast rate}}{\text{acre}} = \text{amount needed per acre of field}$$

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## SPRAY DRIFT MANAGEMENT

A variety of factors including weather conditions (e.g., wind direction, wind speed, temperature, relative humidity) and method of application can influence pesticide drift. The applicator must evaluate all factors and make appropriate adjustments when applying this product.

**Wind Speed:** Do not apply at wind speeds greater than 15 mph.

**Droplet Size:** Apply as a medium or coarser spray (ASAE Standard 572).

**Temperature Inversions:** If applying at wind speeds less than 3 mph, the applicator must determine if a) conditions of temperature inversion exist, or b) stable atmospheric conditions exist at or below nozzle height. Do not make applications into areas of temperature inversions or stable atmospheric conditions.

**Other State and Local Requirements:** Applicators must follow all state and local pesticide drift requirements regarding application of fluometuron. Where states have more stringent regulations, they must be observed.

**Equipment:** All application equipment must be properly maintained and calibrated using appropriate carriers or surrogates.

**Additional requirements for aerial applications:**

1. The boom length must not exceed 75% of the wingspan or 90% of the rotor blade diameter.
2. Release spray at the lowest height consistent with efficacy and flight safety. Do not release spray at a height greater than 10 feet above the crop canopy unless a greater height is required for aircraft safety.
3. When applications are made with a crosswind, the swath must be displaced downwind. The applicator must compensate for this displacement at the up and downwind edge of the application area by adjusting the path of the aircraft upwind.

**Additional requirement for groundboom application:**

1. Do not apply with a nozzle height greater than 4 feet above the crop canopy.

### Sensitive Areas

Cotoran 4L should only be applied when the potential for drift to adjacent sensitive areas (e.g., residential areas, bodies of water, known habitat for threatened or endangered species, non-target crops) is minimal (e.g., when wind is blowing away from sensitive areas.)

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## STORAGE AND DISPOSAL

Do not contaminate water, food or feed by storage and disposal.

**PESTICIDE STORAGE:** Keep container closed when not in use. Store product in original container only, away from food or feed.

**PESTICIDE DISPOSAL:** Wastes resulting from the use of this product must be disposed of on site or at an approved waste disposal facility.

### CONTAINER DISPOSAL:

**Nonrefillable Container (five gallons or less):** Nonrefillable container. Do not reuse or refill this container. Offer for recycling, if available. Clean container promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Then puncture and dispose of in a sanitary landfill, incinerate or burn, if allowed by state and local authorities. Stay out of smoke from burning container.

**Nonrefillable Container (greater than five gallons):** Nonrefillable container. Do not reuse or refill this container. Offer for recycling, if available. Clean container promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 full with water. Replace and tighten closures. Tip container on its

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side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. Then puncture and dispose of in a sanitary landfill, incinerate or burn, if allowed by state and local authorities. Stay out of smoke from burning container.

**Refillable Container:** Refillable container. Refill this container with fluometuron only. Do not reuse this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To clean the container before final disposal, empty the remaining contents from this container into application equipment or mix tank. Fill the container about 10 percent full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times.

**FOR 24-HOUR EMERGENCY ASSISTANCE (SPILL, LEAK, OR FIRE), CALL INFOTRAC AT 1-800-535-5053.**

Notice to Buyer: Purchase of this material does not confer any rights under patents of countries outside of the United States.

#### LIMITATION OF WARRANTY AND LIABILITY

Read the entire directions for use, conditions of warranties and limitations of liability before using this product. If terms are not acceptable, return the unopened product container at once.

By using this product, user or buyer accepts the following **CONDITIONS, DISCLAIMER OF WARRANTIES and LIMITATIONS OF LIABILITY.**

**CONDITIONS:** The directions for use of this product are believed to be adequate and must be followed carefully. However, it is impossible to eliminate all risks associated with the use of this product. Crop injury, ineffectiveness or other unintended consequences may result because of such factors as weather conditions, presence of other materials, or the manner of use or application, all of which are beyond the control of ~~Makhteshim Agan of North America, Inc~~ADAMA. All such risks shall be assumed by the user or buyer.

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